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Thesling et al. (43) Pub. Date: **Sep. 5, 2002**(54) **SOFT INPUT - SOFT OUTPUT FORWARD
ERROR CORRECTION DECODING FOR
TURBO CODES****Related U.S. Application Data**

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lyn Heights, OH(21) Appl. No.: **09/954,698**(22) Filed: **Sep. 11, 2001**(57) **ABSTRACT**

A method of turbo decoding using soft input-soft output information. A vector of data is sampled from a channel of data. The vector of data is then processed to output a final code word of bits. A final reliability vector of reliability values associated with the final code word is generated, such that each bit of the final code word of bits has a corresponding reliability value in the final reliability vector. Corresponding reliability values for one or more bit positions of the final code word are determined by a difference of distance metrics, and corresponding reliability values for one or more bit positions of the final code word are determined utilizing a numerical approximation.

